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ABSTRACT

One of the biggest barriers to a handicapped individual's coping with his or her disability may be reactions of the public. The present study addressed the problem of public reactions to disability by examining the cognitive perceptual structures which underlie attitudes toward the disabled. Thirty-eight different disability types (plus two nondisability reference items) were included in an analysis utilizing a nondirect technique (similarity categorization) with 45 undergraduates to derive a cognitive map of disability perception. The analysis yielded six distinct clusters: self caused problems, mental dysfunctions, essentially "normal" problems, permanent functional impairments, internal disorders, and sensory defects. (Author)

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The Structure of Disability Perception

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Running head: Disability Perception

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Abstract

One of the biggest barriers to a handicapped individual's coping with his or her disability may be reactions of the public. The present study addressed the problem of public reactions to disability by examining the cognitive perceptual structures which underlie attitudes toward the disabled. Thirty-eight different disability types (plus two non-disability reference items) were included in an analysis utilizing a non-directed technique (similarity categorization) to derive a cognitive map of disability perception. The analysis yielded six distinct clusters: self-caused problems, mental dysfunctions, essentially "normal" problems, permanent functional impairments, internal disorders, and sensory defects.

Perhaps one of the biggest barriers to a handicapped individual's coping with his or her disability are reactions of the public toward disability. A fair amount of research has been done which purports to establish the nature of behavior around the disabled and to understand its etiology. Research on this problem can be divided into three quite distinct camps.

First, the sociological literature has contributed over the years a well-known and influential tradition of theoretical work on "stigma" (e.g. Goffman, 1963; Morriarity, 1974; Richardson, 1976). Arising from a primarily ethnomethodological orientation (Garfinkel, 1974), the "stigma" model proposes that responding to a disabled individual is essentially rule-governed, with the rules dictated by a common belief system. Unfortunately, work on the "stigma" model has tended to be somewhat lacking in experimental backbone, its conclusions being premised on a plethora of convincing anecdotal evidence. Furthermore, the "stigma" model casts reactions to the disabled in a univariate mold, a conceptualization which has simply not proved predictively adequate.

A second literature contributing to the understanding of reactions to the disabled is that of experimental social psychology. A variety of studies has been done exploring the impact of many different types of physical disability

(e.g. DeJong, 1980; Langer, Taylor, Fiske, & Chanowitz, 1976; Siperstein, Bak, & Gottlieb, 1977). Unfortunately, these studies have avoided direct comparisons of different disability types using the same experimental paradigm. The result has been a lack of conceptual integration within the area, and a consequent failure to reconcile some important and seemingly inconsistent findings. While research has revealed reactions to the disabled in a negative light, such as behavioral rigidity and inhibition, and escape (Kleck, Ono, & Hastorf, 1966), other work has demonstrated a positive facet to this responding, such as the "norm-to-be-kind" (Hastorf, Northcraft, & Picciotto, 1979).

Finally, cognitive social psychology has contributed some important attitude research to the understanding of reactions to the disabled (Siller, Ferguson, Van, & Holland, 1975; Tringo, 1975). These studies, however, have suffered from certain methodological shortcomings, having used only a few "representative" types of disability, and directed or univariate techniques of attitude assessment. The picture they have rendered therefore may be somewhat incomplete.

The present study addressed the problem of public reactions to disability by examining relatively unexplored terrain: namely, the cognitive perceptual structures which underlie attitudes toward the disabled. Recent research suggests that attributions based upon perceptions of the

nature of a disability (for instance, perceived responsibility for a disability, or perceived levels of consequent functional impairment) may anchor reactions to it. A structure of disability perception may therefore aid in understanding attitude formation and reactions toward the disabled, while helping provide a foundation for integrating the sociological, experimental social, and cognitive social psychological findings in the realm.

Method

Forty-five undergraduates participated as subjects. Thirty-eight different disability types (plus two non-disability control items) were included in an analysis utilizing a non-directed technique (similarity categorization) to derive a cognitive map of disability perception.

Each subject was given a deck of 40 index cards (with one of the forty items on each card), and asked to sort the

Insert Table I about here

cards into piles of similar types. Subjects were encouraged to use as many categories as they felt necessary, and to make each category as large or small as they saw fit.

Results

In sorting the disability items into similarity piles,

subjects used between 3 and 17 categories, the categories varying in size from 1 to 24 disability items. A co-occurrence frequency matrix was derived from the similarity judgements, and submitted to a hierarchical clustering analysis. Clustering was accomplished using the complete linkage (compactness) method (Everitt, 1974). The analysis revealed six principle clusters. Clusters A and B showed a tendency of .00 to cluster with any other clusters; clusters C1 through C4 showed some residual tendency (less

Insert Figures I & II about here

than .03) to cluster with each other. A multi-dimensional scaling analysis of the data was also undertaken in order to assess the possibility of an underlying parametric structure to the clustering analysis solution. The multi-dimensional scaling failed to reveal a coherent underlying dimensional structure, suggesting that the underlying cognitive structure is discreet and categorical, rather than continuous and parametric.¹

Because the clustering analysis was accomplished using a non-directed assessment technique (similarity ratings, rather than supplied semantic dimensions), it does not yield semantic labels for the derived clusters. Judging from the item memberships for each of the six categories,

the six clusters appear to represent: self-caused problems, mental dysfunctions, essentially "normal" problems, permanent functional impairments, internal disorders, and sensory defects.

Discussion

Perception is the foundation of all behavior. Individuals can only act or react according to the distinctions they find in or bring to the interpretation of their environment. Actions will be unintelligible (from an intentional standpoint) if there is no commensurate understanding of the perceptual processes which precede and accompany them. To truly understand why an action occurs, it is necessary to understand the actor's perception of the situation (including his assumptions and preconceptions) by which (to him or her) the action became appropriate or even necessary.

The present study promoted understanding of interaction with the disabled by revealing the kind of perceptual distinctions that certain types of disability elicit, and which thereby underlie reactions in social settings to these disabilities. The emergence of six discreetly distinct categories of disability must raise serious doubts about the adequacy of univariate approaches (such as a continuum of deviant to non-deviant) for interpreting reactions to

disabled individuals. The findings of the present study argue for a discreet, categorical approach to understanding the perception of disability.

In the present study, the perceptual processes of construal and categorization of disability types are represented by the cluster labels, such as "self-caused," "mental dysfunctions," and "internal disorders." These labels signify certain shared assumptions we have about why certain disability types belong together, and are to be distinguished from others. These shared assumptions might be thought to arise either from common experiences which regularly co-occur with certain disabilities, or perhaps from beliefs (even mythical ones) about the etiology of certain types of disability. It is these shared assumptions which constitute the foundations of both our first impressions of disabled individuals, and reactions to unexpected disability in strangers. For instance, the label "essentially 'normal' problems" suggests a sense of normality which may contrast sharply with the rejection and contempt conveyed by the label "self-caused problems." We would expect behaviors to reflect these distinctions as well, though that remains an empirical question at this time.

Significantly, these distinctions in shared assumptions

about different disability types may provide a handle on theoretically integrating the apparently incommensurate research findings noted earlier. Divergences in reactions to different categories within the universe of disability types may be responsible for the inconsistency of research results which have been premised on univariate approaches to disability and handicap. Using the findings of the present research, a finer-grained analysis of reactions to disability would be possible. Specific reactions could be catalogued with the appropriate one of the identified "families" of disability types within the disability universe. The different "families" of disability types identified in this study simply provide a way to explain different reactions in the same situations, where previously (with a univariate approach to disability) only inconsistency would have been seen.

Finally, these assumptions implicit in the perceptual construal and categorization of the disability universe take on added significance when one considers the potential for persistence of impressions based on these preconceptions. Research on self-fulfilling prophecies (e.g. Word, Zanna, & Cooper, 1974) and exacerbation cycles (e.g. Storms & McCaul, 1976) both attest to the possible maintenance and even strengthening of impressions based upon preconceptions, long after learning or habituation would be expected to override

initial reactions. Three processes may promote the perseverance and augmentation of preconceptions and assumptions over continued interactions. First, individuals may simply misconstrue ambiguous actions to fit their expectations (e.g. Zajonc, 1955). Second, actions based upon preconceptions may actually elicit the expected behaviors (e.g. Snyder, Tanke, & Berscheid, 1977). Finally, interaction may cause preconceptions to feed on each other. Perceived comfort or discomfort on one side of an interaction, whether real or imagined, is easily transmitted across the interaction, engendering like responses in a potentially self-perpetuating spiral. The preconceptions of an underlying cognitive structure therefore may still control and direct behavior long after initial encounters are water under the bridge.

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Footnotes

¹To confirm this last proposition, an additional 25 subjects were solicited from an adult Sunday school class in Boca Raton, Florida. Each subject rated all 40 disability types on two (randomly assigned) of eight common characteristics. This data was subjected to a discriminant analysis, keying on the six principle clusters derived from the clustering analysis. Again, no coherent underlying dimensional structure emerged, confirming the previous assertion that perception of disability may be best conceived of as a discreet phenomenon, with categories rather than dimensions playing the greatest role in the perceptual process.

Table 1

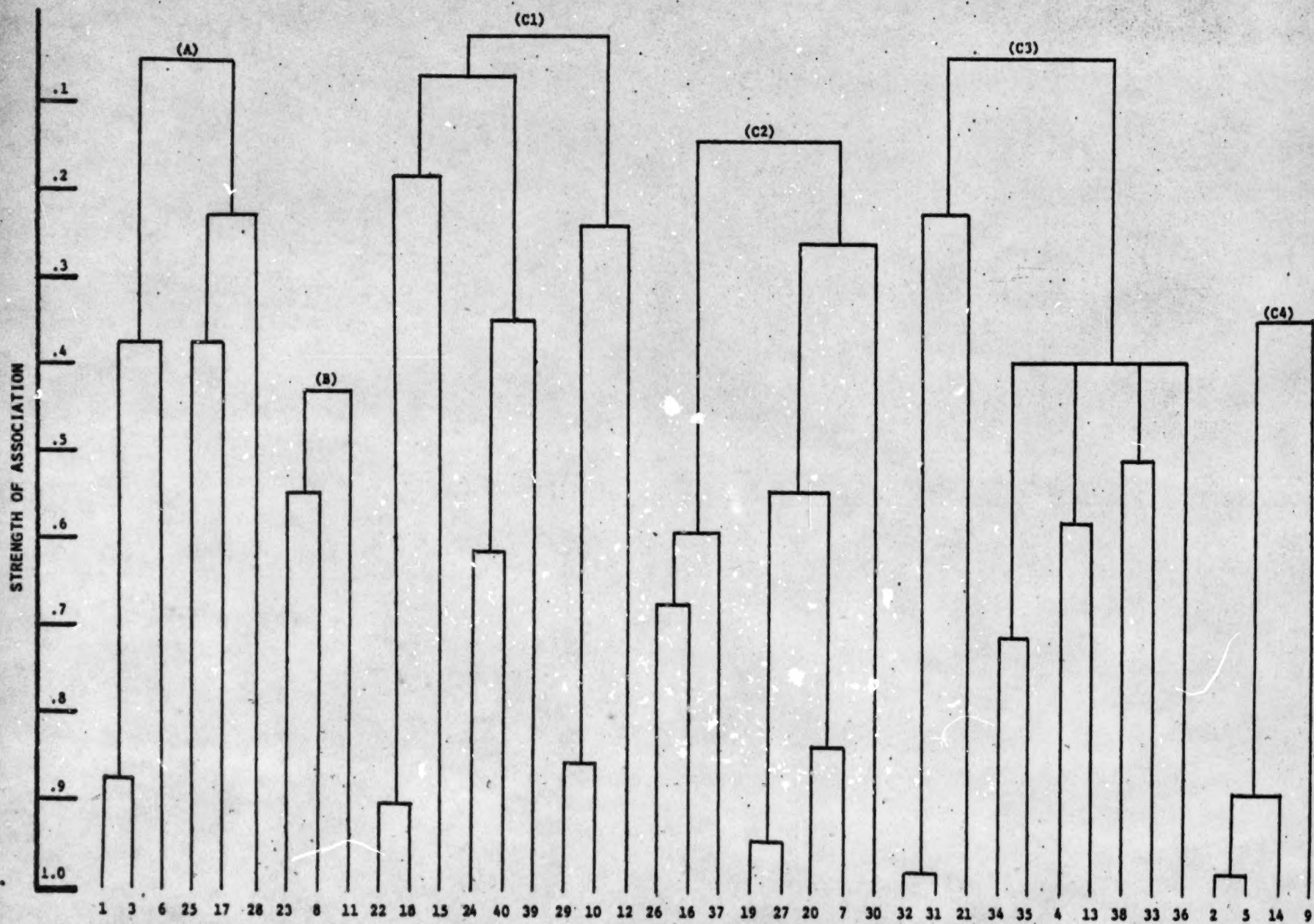
The forty disability items.

- 01 an alcoholic
- 02 a blind person
- 03 a drug addict
- 04 an epileptic
- 05 a deaf person
- 06 an ex-convict
- 07 a paraplegic (an individual who has lost the use of his or her legs)
- 08 a mentally retarded person
- 09 someone who talks with a speech impediment
- 10 someone with permanent facial scars
- 11 someone who is obviously senile from old age
- 12 a hunchback
- 13 someone with diabetes
- 14 a mute
- 15 a perfectly normal, healthy individual
- 16 someone who has to use crutches
- 17 someone who is obese
- 18 someone who is abnormally short
- 19 someone who is missing an arm
- 20 a quadraplegic (an individual who has lost the use of both his or her arms and legs)
- 21 someone with cerebral palsey
- 22 someone who is abnormally tall
- 23 someone who is mentally ill
- 24 someone with bad facial skin blemishing
- 25 someone with ulcers
- 26 someone who wears a back brace
- 27 someone who is missing a leg
- 28 someone who has syphilis
- 29 someone with all-over body scarring (for instance from burns)
- 30 a bedridden invalid
- 31 someone with leukemia
- 32 someone with cancer
- 33 someone with heart trouble
- 34 someone with arthritis
- 35 someone with asthma
- 36 someone with tuberculosis
- 37 someone who has to use a wheelchair
- 38 someone with high blood pressure
- 39 someone with a temporary cast (from an accident, for example)
- 40 someone whose face is covered with temporary scabs (for instance from an accident)

Figure Captions

Figure 1. Sequence of cluster formation for the forty disability items.

Figure 2. Graphic representation of the cluster formation for the forty disability items.



(A) SELF-CAUSED PROBLEMS

01 an alcoholic 03 a drug addict
06 an ex-convict
28 someone who has syphilis
25 someone with ulcers 17 someone who is obese

(B) MENTAL DYSFUNCTIONS

11 someone who is obviously senile from old age
23 someone who is mentally ill 08 a mentally retarded person

(C1) ESSENTIALLY "NORMAL" PROBLEMS

29 someone with all-over body scarring (for instance from burns) 10 someone with permanent facial scars
12 a hunchback
39 someone with a temporary cast (from an accident, for example)
24 someone with bad facial skin blemishing 40 someone whose face is covered with temporary scabs (for instance, from an accident)
22 someone who is abnormally tall 18 someone who is abnormally short
15 a perfectly normal, healthy individual

(C2) PERMANENT FUNCTIONAL IMPAIRMENTS

26 someone who wears a back brace 16 someone who has to use crutches
37 someone who has to use a wheelchair
20 a quadriplegic (an individual who has lost the use of both his or her arms and legs) 07 a paraplegic (an individual who has lost the use of his or her legs)
19 someone who is missing an arm 27 someone who is missing a leg
30 a bedridden invalid

(C3) INTERNAL DISORDERS

32 someone with cancer 31 someone with leukemia
21 someone with cerebral palsy
36 someone with tuberculosis
13 someone with diabetes 04 an epileptic
34 someone with arthritis 35 someone with asthma
38 someone with high blood pressure 33 someone with heart trouble

(C4) SENSORY DEFECTS

02 a blind person 05 a deaf person
14 a mute
09 someone who talks with a speech impediment